

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Silke GORONZY et al.

U.S. Serial No.: Filed Concurrently Herewith

Title of Invention: METHODS FOR GENERATING PRONOUNCIATION
VARIANTS AND FOR RECOGNIZING SPEECH

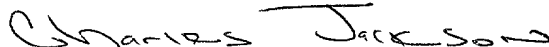
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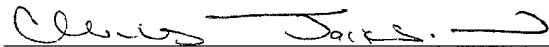
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PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Box Patent Application (35 U.S.C. 111)
Washington, D.C. 20231

Sir:

Before the issuance of the first Office Action, please amend the above-identified application as follows:

IN THE CLAIMS:

Please amend claims 3-5, 7, 9-13, 15, and 17-20 as follows:

3. (Amended) Method according to claim 1, wherein speech in said source language (SL) and/or dialect of at least one and with respect to said source language (SL) and/or dialect native speaker is used for training.

4. (Amended) Method according to claim 1, wherein sets of pronunciation variants and/or rules are derived from said analysis in each case as pronunciation variants and/or rules of speakers of said source language (SL) as a mother tongue or native language trying to speak said target language (TL) as a foreign language.
5. (Amended) Method according to claim 1, wherein new pronunciation variants are generated by applying said derived pronunciation rules to a given starting lexicon for said target language (TL), in particular so as to enrich said starting lexicon to yield a modified lexicon, in particular for a recognition process for said target language (TL).
7. (Amended) Method according to claim 1, wherein a recognition process or system (SR) which is specific for said source language (SL) is employed for generating pronunciation variants and/or rules.
9. (Amended) Method according to claim 7, wherein said recognition process or system for generating pronunciation variants contains or is based on at least a phone loop structure for recognizing sequences of phones, phonemes and/or other language subunits or the like.
10. (Amended) Method according to claim 7, wherein said recognition process or system (SR) for generating pronunciation variants and/or rules is restricted by a n-gram structure, in particular by a bi-gram structure, or the like, in particular trained on said source language (SL).
11. (Amended) Method according to claim 1, wherein speech of a variety of speakers of the target language (TL) and/or dialect as a native or mother language is analyzed so as to further increase the set of pronunciation variants and/or rules for said target language (TL).

12. (Amended) Method according to claim 1, which is trained in advance of a process for recognizing speech based on training data, in particular by evaluating a given speech data base of said target language (TL) and or dialect.
13. (Amended) Method according to claim 1, which is trained during the application to a process of recognizing speech of said target language (TL) by a speaker of said target language (TL) as a native or mother language.
15. (Amended) Method for recognizing speech of at least one target language (TL), wherein a method for generating pronunciation variants according to claim 1 is involved.
17. (Amended) Method according to claim 15, wherein the generation of pronunciation variants is carried out at least in part during the process of recognizing speech of said target language (TL).
18. (Amended) Method according to claim 15, wherein a variety of different source languages (SL) and/or of target languages (TL) is involved.
19. (Amended) System for generating pronunciation variants and/or rules and/or for recognizing speech which is capable of performing the method according to claim 1.
20. (Amended) Computer program product, comprising computer program means adapted to perform and/or realize the method for generating pronunciation variants and/or rules according to claim 1 when executed on a computer.


REMARKS

Claims 1-20 remain in the application. Claims 3-5, 7, 9-13, 15, and 17-20 have been amended to eliminate multiple dependencies. Attached hereto is a marked up version of the changes made to claims 3-5, 7, 9-13, 15, and 17-20 by the current amendment. The attached page is captioned "**Version with markings to show changes made.**" The filing fee has been calculated based upon these amendments to the claims.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE**In the claims:**

3. (Amended) Method according to claim 1 ~~or 2~~, wherein speech in said source language (SL) and/or dialect of at least one and with respect to said source language (SL) and/or dialect native speaker is used for training.
4. (Amended) Method according to claim 1 ~~anyone of the preceding claims~~, wherein sets of pronunciation variants and/or rules are derived from said analysis in each case as pronunciation variants and/or rules of speakers of said source language (SL) as a mother tongue or native language trying to speak said target language (TL) as a foreign language.
5. (Amended) Method according to claim 1 ~~anyone of the preceding claims~~, wherein new pronunciation variants are generated by applying said derived pronunciation rules to a given starting lexicon for said target language (TL), in particular so as to enrich said starting lexicon to yield a modified lexicon, in particular for a recognition process for said target language (TL).
7. (Amended) Method according to claim 1 ~~anyone of the preceding claims~~, wherein a recognition process or system (SR) which is specific for said source language (SL) is employed for generating pronunciation variants and/or rules.
9. (Amended) Method according to claim 7 ~~or 8~~, wherein said recognition process or system for generating pronunciation variants contains or is based on at least a phone loop structure for recognizing sequences of phones, phonemes and/or other language subunits or the like.

10. (Amended) Method according to claim 7 ~~anyone of the claims 7 to 9~~, wherein said recognition process or system (SR) for generating pronunciation variants and/or rules is restricted by a n-gram structure, in particular by a bi-gram structure, or the like, in particular trained on said source language (SL).

11. (Amended) Method according to claim 1 ~~anyone of the preceding claims~~, wherein speech of a variety of speakers of the target language (TL) and/or dialect as a native or mother language is analyzed so as to further increase the set of pronunciation variants and/or rules for said target language (TL).

12. (Amended) Method according to claim 1 ~~anyone of the preceding claims~~, which is trained in advance of a process for recognizing speech based on training data, in particular by evaluating a given speech data base of said target language (TL) and or dialect.

13. (Amended) Method according to claim 1 ~~anyone of the preceding claims~~, which is trained during the application to a process of recognizing speech of said target language (TL) by a speaker of said target language (TL) as a native or mother language.

15. (Amended) Method for recognizing speech of at least one target language (TL), wherein a method for generating pronunciation variants according to claim 1 ~~anyone of the claims 1 to 14~~ is involved.

17. (Amended) Method according to claim 15 ~~or 16~~, wherein the generation of pronunciation variants is carried out at least in part during the process of recognizing speech of said target language (TL).

18. (Amended) Method according to claim 15 ~~anyone of the claims 15 to 17~~, wherein a variety of different source languages (SL) and/or of target languages (TL) is involved.

19. (Amended) System for generating pronunciation variants and/or rules and/or for recognizing speech which is capable of performing the method according to claim 1 ~~anyone of the claims 1 to 14 and/or the method according to anyone of the claims 15 to 18.~~

20. (Amended) Computer program product, comprising computer program means adapted to perform and/or realize the method for generating pronunciation variants and/or rules according to claim 1 ~~anyone of the claims 1 to 14 and/or the method for recognizing speech according to anyone of the claims 15 to 18 and/or the steps thereof when it is executed on a computer, a digital signal processing means and/or the like.~~